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Cap. 2

UNITED STATES DEPARTMENT OF AGRICULTURE  
AGRICULTURAL RESEARCH SERVICE  
ANIMAL HEALTH DIVISION  
FEDERAL CENTER BUILDING  
HYATTSVILLE, MARYLAND 20782

# REPORT OF COOPERATIVE TICK ERADICATION ACTIVITIES

## Fiscal Year 1966

### THE ERADICATION PROGRAM

Cattle fever ticks Boophilus annulatus and Boophilus microplus spread bovine piroplasmosis--a severe and often fatal disease of cattle. It is also known as cattle tick fever, southern cattle fever, splenetic fever, and Texas fever.

Tick larvae hatch from eggs laid on the ground, become attached to animals occupying infested premises, feed upon the host animal--and thus transmit the disease--molt, mate, and the engorged female drops to the ground to deposit her eggs and thus the ticks are perpetuated.

An all-out eradication program was instituted in 1906. Thirty-seven years later, in 1943, the tick had been eradicated from the United States, except for a narrow buffer zone under Federal and State quarantines along the Texas-Mexico border. There, reinfestations occur and an active program is required to prevent additional spread into adjacent areas. Reinfestations have also occurred in California and in Florida from time to time.

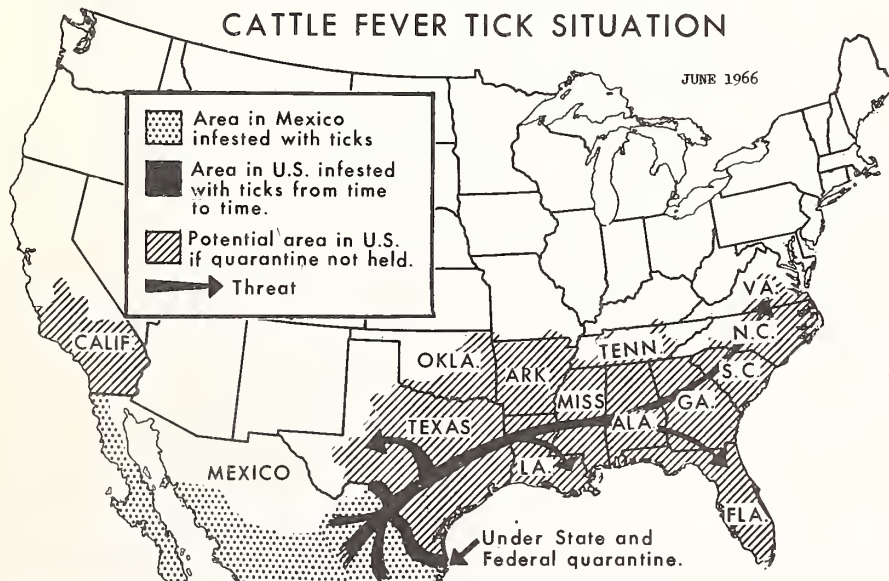
The eradication program includes inspection, quarantine, and dipping of infested or exposed animals.

### PROGRAM GOALS

Prevention--keeping the ticks out of the United States--is a major part of the effort against cattle fever ticks. A quarantine zone is maintained along the international boundary and the lower Rio Grande River in eight Texas counties as adjacent areas in Mexico are infested. Cattle from Mexico are carefully inspected for ticks at the border. They must be free of ticks and must be given a precautionary dipping before they can be imported.

Without these controls, cattle fever ticks would reinfest areas of the United States that have warm climates. In spite of continued efforts to keep out these parasites, they have reappeared from time to time, but vigilance and prompt eradication measures have eliminated the outbreaks.

Should the ticks gain a foothold, piroplasma-carrier cattle imported from Mexico could furnish reservoirs leading to heavy losses in our cattle population.



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ACTIVE PROGRAM CONTINUES IN TEXAS

As the territory in Mexico adjacent to the international boundary along the lower Rio Grande River is tick infested, reinfestations in Texas by ticks carried by Mexican animals illegally entering the United States occur regularly. The river, serving as the boundary, is not an effective barrier against such illegal movements. A buffer area, under Federal and State quarantine, extends from Del Rio to the Gulf of Mexico, approximately 500 miles. This zone is constantly patrolled by Division inspectors who, in cooperation with the Texas Animal Health Commission, work diligently to reduce the introduction and prevent the dissemination of the ticks. The area under quarantine includes parts of Cameron, Hidalgo, Kinney, Maverick, Starr, Val Verde, Webb and Zapata counties. Slight modifications were made along the quarantine line in August 1964 and in August 1965. In addition to the activities shown below, 549 ticks were collected for survey purposes, 41 samples of suspected screwworms and 5 skin scraping samples were submitted for identification and 138 other disease conditions reported.

REPORT OF ACTIVITIES IN BUFFER AREAS  
FISCAL YEARS 1961 THROUGH 1966 AND IN 1952

<u>Illegally Entering Mexican Livestock Caught</u>	<u>1966</u>	<u>1965</u>	<u>1964</u>	<u>1963</u>	<u>1962</u>	<u>1961</u>	<u>1952</u>
Equine - tick-infested	148 - 10	108 - 0	133 - 1	122 - 4	120 - 9	61 - 2	1,873 - 183
Cattle - tick-infested	110 - 42	54 - 11	239 - 42	139 - 41	59 - 26	17 - 8	147 - 82
Sheep and Goats - tick-infested	0 - 0	0 - 0	6 - 0	1 - 0	5 - 0	1 - 0	0 - 0
Elephant - tick-infested	1 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0	0 - 0
<u>American Livestock Straying to Mexico and Returning</u>	14 - 0	56 - 0	18 - 1	51 - 0	17 - 0	8 - 0	7 - 0
<u>Inspected for Ticks</u>							
<u>Systematic Area</u>							
Herds	41,124	47,501	47,214	49,080	42,298	35,269	32,363
Livestock	1,125,365	1,308,526	1,388,816	1,381,195	926,872	739,959	558,809
<u>Final Area</u>							
Herds	20,099	18,363	16,562	16,695	14,879	15,653	12,011
Livestock	564,337	574,883	349,027	344,814	297,304	293,830	168,088
<u>Dipped for Ticks</u>							
<u>Systematic Area</u>							
Herds	13,052	12,517	11,731	11,847	10,424	10,382	13,845
Livestock	76,967	81,914	80,895	88,518	56,655	58,201	81,685
<u>Final Area</u>							
Herds	987	702	478	606	641	529	113
Livestock	9,646	3,251	1,784	2,815	2,184	4,950	1,323
<u>Intrastate Certificates Issued</u>							
<u>Number of Certificates</u>	14,677	13,882	14,685	14,556	14,023	13,046	14,913
<u>Number of Livestock</u>	85,657	70,368	99,294	188,732	123,257	83,952	57,704
<u>Interstate Certificates Issued</u>							
<u>Number of Certificates</u>	16	10	56	67	65	66	13
<u>Number of Livestock</u>	2,141	1,860	6,667	8,134	7,205	12,668	808
<u>Herds Held for Further Treatment</u>							
Systematic Area	26	28	20	48	14	5	92
Final Area	1	1	0	0	0	4	0
<u>Tick-Infested Herds Found</u>							
Systematic Area	21	16	4	38	21	1	29
Final Area	1	0	0	1	0	0	1
<u>Exposures to Clean Premises</u>	19	36	26	68	16	25	108
<u>Re-exposures to Held Premises</u>	2	1	3	3	5	1	73

PROGRESS IN PUERTO RICO AND THE U. S. VIRGIN ISLANDS

In Puerto Rico an active tick eradication program began in 1936. Here, the tropical variety of the fever tick, B. microplus, was prevalent and it was necessary to treat sheep and goats as well as equines and cattle, and to slaughter deer.

No cattle fever ticks have been found since December 1952. Systematic dippings were discontinued in May 1953 and systematic inspections discontinued in June 1954. Survey inspections for ticks are continuing.

The Islands of St. Croix, St. Thomas, and St. John of the U. S. Virgin Islands remain tick infested.

## EXOTIC TICKS FOUND IN THE UNITED STATES

Where Collected	Parasite	Remarks
New Jersey <sup>a</sup>	<u>Rhipicephalus evertsi evertsi</u>	Eland being imported from Africa.
	<u>Boophilus decoloratus</u>	Hartebeest and giraffe being imported from Africa.
	<u>Rhipicephalus evertsi evertsi</u> and <u>Rhipicephalus pulchellus</u>	Zebras being imported from Africa.
	<u>Hyalomma marginatum</u> and and <u>Rhipicephalus bursa</u>	Horses being imported from Spain.
	<u>Hyalomma marginatum</u>	Horse being imported from Africa.
	<u>Rhipicephalus evertsi mimeticus</u>	Zebra being imported from Africa.
	<u>Rhipicephalus appendiculatus</u>	Zebra being imported from Africa.
Florida <sup>b</sup>	<u>Dermacentor nitens</u>	Horses being imported from Columbia.
Texas <sup>c</sup>	<u>Dermacentor nitens</u>	Horses being imported from Peru.
Texas and California	<u>Amblyomma hebraeum</u>	African rhinoceroses en route from Alabama to California.
Kansas	<u>Amblyomma dissimile</u>	Boa constictor.
Maryland	<u>Amblyomma rotundatum</u>	Snake.
New Jersey	<u>Amblyomma dissimile</u>	Boa constrictor.
New York	<u>Haemaphysalis leachii muhsami</u>	Bat-eared fox.
Puerto Rico	<u>Amblyomma cruciferum</u>	Iguana.
	<u>Boophilus microplus</u>	Cattle hides.
Florida	<u>Amblyomma tholloni</u>	Imported elephant.
Texas	<u>Amblyomma tholloni</u>	Imported elephant.
Michigan	<u>Amblyomma gemma</u> , <u>Amblyomma variegatum</u> , <u>Rhipicephalus pulchellus</u> , and <u>Rhipicephalus simus simus</u> .	Imported rhinoceros.

a. USDA Animal Quarantine Station, Clifton, New Jersey.

b. Ticks of limited distribution in United States. Collected at USDA Animal Quarantine Station, Miami Airport.

c. Ticks of limited distribution in United States. Collected at Galveston, Texas, port.

PARASITE IDENTIFICATION AND/OR CONFIRMATION  
AT BELTSVILLE ECTOPARASITE REFERENCE CENTER

Emphasis on the importance of collecting ticks from all livestock species for identification continued during Fiscal Year 1966. A total of 2,459 lots of ticks were received and identified at the ANH Ectoparasite Reference Center, Beltsville, Maryland.

During the same period, 698 mite specimens and 50 miscellaneous ectoparasite specimens were identified.

Approximately 5,340 lots of suspected screwworm larvae were received and identified. Of these, 1,114 lots were identified as screwworms; the remainder being classed as other various species of blow fly larvae.

A detailed report, "National Tick Surveillance Program - Calendar Year 1965," was distributed under the date of May 10, 1966.

ACTIVITIES IN TEXAS

Division inspectors stationed along the United States-Mexico border rejected 89 lots of 11,987 cattle and one lot of 3 burros as these animals were found to be infested with Boophilus spp. ticks.

Three livestock tick training schools were held in Laredo, Texas, during October 1965. The courses were attended by 11 State and 35 Federal Animal Health regulatory personnel from Texas. The training sessions were conducted by ANH Division personnel to teach the livestock inspectors and veterinarians the fundamentals of the identification, biology, inspection, treatment, and eradication of cattle fever ticks (Boophilus spp.). Emphasis was also placed on the recognition and importance of domestic livestock ticks.